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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				PE 0604327F: <i>Hardened Target Munitions</i>							
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	20.804	22.389	38.248	-	38.248	1.624	0.103	-	-	Continuing	Continuing
645341: <i>Direct Strike Penetrator Systems</i>	20.804	22.389	38.248	-	38.248	1.624	0.103	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

Hard Target Munitions program is an effort to hold at risk those highest priority assets essential to an enemy's warfighting capability that are protected by multiple layers of reinforced concrete, rock rubble, and/or earth overburden (Examples include enemy command and control facilities, air defense facilities, facilities for production, storage, and deployment of weapons including weapons of mass destruction, surface to surface missile launch sites, aircraft storage sites, artillery sites.) Potential solutions include (but are not limited to) Special Forces, conventional short or long range ballistic missiles (land or sea launched), cruise missiles, direct attack munitions, and standoff weapons. Direct Strike Penetrator Systems includes development of Massive Ordnance Penetrator (MOP), an advanced precision guided penetrator munition that will provide the Air Force with an improved capability using air-to-surface conventional munitions to attack target types described above, with fewer weapons and number of missions necessary to defeat targets and increase overall survivability. Direct Strike Penetrator Systems also includes an analysis and report to evaluate the performance, operational suitability, and cost of alternative hard target defeat systems.

This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	20.891	22.389	42.640	-	42.640
Current President's Budget	20.804	22.389	38.248	-	38.248
Total Adjustments	-0.087	-	-4.392	-	-4.392
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.087	-	-4.392	-	-4.392

Change Summary Explanation

FY12 adjustment towards higher Air Force priorities.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0604327F: Hardened Target Munitions				PROJECT 645341: Direct Strike Penetrator Systems			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
645341: Direct Strike Penetrator Systems	20.804	22.389	38.248	-	38.248	1.624	0.103	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
Direct Strike Penetrator Systems project includes development of Massive Ordnance Penetrator (MOP), an advanced precision guided penetrator munition that will provide the Air Force with an improved capability using air-to-surface conventional munitions to attack HDBTs, such as bunker and tunnel facilities, with fewer weapons and number of missions necessary to defeat targets and increase overall survivability. The system will hold at risk those highest priority assets essential to the enemy's warfighting ability, which are heavily defended and protected, providing a critical global strike capability not currently met by inventory conventional weapons. Direct Strike Penetrator Systems also includes an analysis and report to evaluate the performance, operational suitability, and cost of alternative hard target defeat systems.											
This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) because effort are necessary to evaluate integrated technologies, representative modes or prototype systems in high fidelity and realistic operating environment.											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Massive Ordnance Penetrator (MOP) Weapon Development							11.491	11.040	9.964	-	9.964
Description: Massive Ordnance Penetrator (MOP) Weapon Development. Make changes to the B-52 Technology Demonstration design to allow integration of the MOP onto the B-2A.											
FY 2010 Accomplishments: Analyze and update the MOP system design against the MOP Quick Reaction Capability (QRC) Systems Requirements Document (SRD) and the B-2A Interface Control Documents (ICDs) to ensure weapon-to-aircraft compatibility and weapon performance in the operating environment.											
FY 2011 Plans: Complete analysis and provide data/documentation required to support B-2A design, integration, and weapon system effectiveness. Finalize system performance specification, which documents the weapon performance based on ground and flight tests. Update design to reflect changes needed to meet the weapon system performance objectives.											
FY 2012 Base Plans: Continue to design update to ensure weapon-to-aircraft compatibility and weapon performance in the operating environment. Procurement of repair parts for weapon sustainment, Engineering support and any required											

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
updates to mission software. Modification to source technical orders to include MOP. Labor and repair parts for MOP weapon trainer. FY 2012 OCO Plans:						
Title: MOP System Test and Evaluation Description: Qualification Testing: MOP system qualification testing to allow weapon certification onto the B-2A. System Test and Evaluation: Conduct ground and flight tests of the MOP weapon system in order to demonstrate weapon effectiveness and suitability. FY 2010 Accomplishments: Fabricate hardware and plan/execute test. Qualification testing will include, but not be limited to, the delta qualification tests of the tail kit, hazards of electronic radiation to ordnance(HERO) certification of the weapon, and certification of the carriage equipment. Complete test and integration functions necessary to employ the MOP onto the B-2A. Included are safe separation analysis, software design updates, ground/flight worthiness testing, and safe separation flight tests. FY 2011 Plans: Complete multiple live and inert flight tests. Analyze data and evaluate the demonstrated weapon capability against the performance specification. FY 2012 Base Plans: Conduct qualification, ground and flight tests to verify design modifications. FY 2012 OCO Plans:		4.900	5.100	9.344	-	9.344
Title: MOP Flight Test Assets Fabrication Description: Flight Test Asset Fabrication. Fabricate all hardware (weapons, loading adapters, and carriage equipment) needed to execute flight testing FY 2010 Accomplishments: Build MOP all up rounds (AURs) to support two safe separation tests and four developmental tests. FY 2011 Plans:		2.800	4.604	7.000	-	7.000

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Build residual flight test assets to support more developmental tests and potential operational testing. FY 2012 Base Plans: Build MOP AURs to support 3 flight tests. FY 2012 OCO Plans:						
Title: Program Office Support Description: Support weapon development activities such as design reviews and ground/flight test planning and execution. FY 2010 Accomplishments: Support weapon development activities such as design reviews and ground/flight test planning and execution. FY 2011 Plans: Execute MOP flight test program and provide weapon performance capability to the user. FY 2012 Base Plans: Support weapon development and test activities. FY 2012 OCO Plans:		1.613	1.645	1.640	-	1.640
Title: Hard and Deeply Buried Target (HDBT) Capability Analysis Description: Evaluation of alternative hard target weapons to assess the performance, operational effectiveness, operational suitability, and estimated system procurement costs based on findings in the the HDBT Initial Cababilities Document (ICD), dated September 2005. FY 2010 Accomplishments: FY 2011 Plans: FY 2012 Base Plans: Evaluation of alternative hard target weapons to assess the performance, operational effectiveness, operational suitability, and estimated system procurement costs based on findings in the the HDBT Initial Cababilities Document (ICD), dated September 2005. FY 2012 OCO Plans:		-	-	10.300	-	10.300

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)			R-1 ITEM NOMENCLATURE PE 0604327F: Hardened Target Munitions			PROJECT 645341: Direct Strike Penetrator Systems					
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Accomplishments/Planned Programs Subtotals							20.804	22.389	38.248	-	38.248
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PE 0101127F: B-2 Advanced Technology Bomber (RDT&E)	11.621	2.980	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0101127F (1): B-2 Squadrons (APAF)	14.887	7.764	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
D. Acquisition Strategy MOP is a Quick reaction capability with a sole source cost plus incentive fee contract to a single contractor.											
E. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force											DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0604327F: Hardened Target Munitions				PROJECT 645341: Direct Strike Penetrator Systems						
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
MOP Weapon Development	SS/CPIF	Boeing:St Louis, MO	53.991	11.040	Dec 2010	6.137	Dec 2011	-		6.137	0.000	71.168	71.168	
HDBT Capabilities Analysis	Various	ACC:Langley AFB, VA	-	-		10.300	Jan 2012	-		10.300	0.000	10.300	10.300	
Subtotal			53.991	11.040		16.437		-		16.437	0.000	81.468	81.468	
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
MOP Interim Support and Sustainment	SS/FFP	Boeing:St Louis, MO	-	-		3.827	Dec 2011	-		3.827	0.000	3.827	3.827	
Subtotal			-	-		3.827		-		3.827	0.000	3.827	3.827	
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
MOP Qualification Testing	SS/CPIF	Boeing:St Louis, MO	7.000	-		4.344	Dec 2011	-		4.344	0.000	11.344	11.344	
MOP System Test & Evaluation	RO	Eglin AFB:, FL	4.800	5.100	Dec 2010	5.000	Dec 2011	-		5.000	0.000	14.900	14.900	
MOP Flight Test Assets Fabrication	SS/CPIF	Boeing:St Louis, MO	5.900	4.604	Dec 2010	7.000	Dec 2011	-		7.000	0.000	17.504	17.504	
Subtotal			17.700	9.704		16.344		-		16.344	0.000	43.748	43.748	
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
AAC	TBD	Eglin AFB:, FL	3.323	1.645		1.640	Dec 2011	-		1.640	1.734	8.342	8.438	
Subtotal			3.323	1.645		1.640		-		1.640	1.734	8.342	8.438	

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		Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		75.014	22.389		38.248		-		38.248	1.734	137.385	137.481

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force			DATE: February 2011
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Design Modification & Qualification Testing	4	2010	4	2012
Fuze & Ground Testing	3	2010	4	2012
Test Article Fabrication	4	2010	4	2012
Flight Test	2	2010	4	2012

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